```r
> #2020/12/18(五), 109 學年第一學期 資料科學應用 R 作業(6)
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> #ex2.9(a)
> set.seed(12345)
> number <- sample(0:100, 1000, replace=T)
> count <- 0
> location <- 1
> for(i in 1:length(number)){
+     if(number[i] %% 2 == 0){
+         count <- count + 1
+         if(count == 100){
+             even <- number[i]
+             location <- i
+             break
+         }
+     }
+ }
> cat("位置:",location, "\n")
位置: 212
> cat("數字:",even , "\n")
數字: 62
>
> #ex2.9(b)
> count <- 0
> location <- 1
> repeat{
+     if(number[i] %% 2 ==0){
+         count <- count + 1
+         if(count == 100){
+             even <- number[i]
+             location <- i
+             break
+         }
+     }
+     }
> cat("位置:",location, "\n")
位置: 212
> cat("數字:",even , "\n")
```

數字: 62
>
> #ex2.9(c)
> count <- 0
> location <- 1
> while(number[i] %% 2 ==0){
+   count <- count + 1
+   if(count == 100){
+   even <- number[i]
+   location <- i
+   break
+   }
+   }
> cat("位置:",location, "\n")
位置: 212
> cat("數字:",even , "\n")
數字: 62
>
> #ex2.53
> a <- data.frame(cbind(mtcars$cyl, mtcars$disp, mtcars$hp, mtcars$drat, mtcars$wt, mtcars$qsec))
> colnames(a) <- c("cyl", "disp", "hp", "drat", "wt", "qsec")
> mean(a$"disp"[a$"cyl" == 4])
[1] 105.1364
> mean(a$"disp"[a$"cyl" == 6])
[1] 183.3143
> mean(a$"disp"[a$"cyl" == 8])
[1] 353.1
> mean(a$"hp"[a$"cyl" == 4])
[1] 82.63636
> mean(a$"hp"[a$"cyl" == 6])
[1] 122.2857
> mean(a$"hp"[a$"cyl" == 8])
[1] 209.2143
> mean(a$"drat"[a$"cyl" == 4])
[1] 4.070909
> mean(a$"drat"[a$"cyl" == 6])
[1] 3.585714

```
> mean(a$"drat"[a$"cyl" == 8 ])
[1] 3.229286
> mean(a$"wt"[a$"cyl" == 4 ])
[1] 2.285727
> mean(a$"wt"[a$"cyl" == 6 ])
[1] 3.117143
> mean(a$"wt"[a$"cyl" == 8 ])
[1] 3.999214
> mean(a$"qsec"[a$"cyl" == 4 ])
[1] 19.13727
> mean(a$"qsec"[a$"cyl" == 6 ])
[1] 17.97714
> mean(a$"qsec"[a$"cyl" == 8 ])
[1] 16.77214
>
> # ex2.62(a)
> u <- as.factor(sample(c("剪刀", "石頭", "布"), 1, replace=T))
> u
[1] 石頭
Levels: 石頭
>
> # ex2.62(b)
> y <- function(m){
+     cat("請輸入你要出的拳頭:(a: 剪刀, b: 石頭, c: 布, d: 不玩了):", m,"\n")
+     cat("玩家出:")
+     switch(m,
+             a=cat("剪刀","\n"),
+             b=cat("石頭","\n"),
+             c=cat("布","\n"),
+             d=cat("不玩了","\n"))
+ }
> y("a")
請輸入你要出的拳頭:(a: 剪刀, b: 石頭, c: 布, d: 不玩了): a
玩家出:剪刀
```